UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

NA-S&PF
Delaware, Ohio

REPLY TO: 5200 Forest Insect & Disease Control December 9, 1975

SUBJECT: Fall Cankerworm Evaluation

TO: John P. Butt
Forest Supervisor
Allegheny National Forest

Aerial detection surveys and subsequent ground examinations during 1975 revealed an outbreak of the fall cankerworm, Alsophila pomentaria, on approximately 67,000 acres of the Allegheny National Forest. The linden looper, Erannis tiliaria (Harris), also was responsible for scattered heavy defoliation on the Forest.

During the first week in December, D. R. Bridgwater, Entomologist from the Delaware Field Office, and J. B. Hanson, R-9 Coordinator, conducted a preliminary evaluation of fall cankerworm populations. This evaluation utilized the female moth trapping method to predict the amount of defoliation that can be expected in 1976. The purpose of this letter is to present an overview of the situation with possible alternative courses of action.

Present Situation. Our preliminary biological evaluation indicates that during 1976, the Forest can expect at least the same amount of defoliation that occurred over the northern half of the Bradford District in 1975. Heavy defoliation can be expected in the vicinity of the District Office and the Tracy Ridge and Willow Bay Campgrounds. The attached map shows the location of our plots and the expected defoliation. An additional evaluation utilizing egg mass counts will be made in February and we will update our prediction at that time.

Life History. In Pennsylvania, egg hatch occurs during early May. The emerging larvae eat portions of leaves, and later, larger larvae eat the entire leaf. Feeding continues through June at which time pupation occurs in the soil. Adults emerge in November, mate, and females deposit their eggs in masses on the smaller branches of the crown.

Damage. A single year's defoliation usually poses no threat to a healthy forest stand. However, after two or three consecutive years of heavy defoliation, some mortality may occur.

History of Outbreak. Fall cankerworm populations usually remain at high levels for three or four years. Natural population collapses usually result from high egg parasitism. The Allegheny National Forest experienced their second year of defoliation during 1975.

Alternatives. In reviewing the history of the insect and the present situation on the Allegheny National Forest, we propose two major alternatives for action. The alternatives may be used singularly or in combination to resolve the pest problem.

Chemical Control. Chemical control requires an Environmental Impact Statement and a registered insecticide. Presently, Sevin-4-oil applied at 1 lb/ai/acre and Bacillus thuringiensis, a bacterium, are registered for use against the fall cankerworm. There are three levels of chemical suppression that can be considered:

1. General widespread spraying of the entire outbreak.
2. Spraying of only recreational and aesthetic areas.
3. Spraying of only campgrounds.

The procedures and responsibilities inherent in any chemical suppression effort are listed as follows:

1. Aerial and ground detection surveys (FI&DM)
2. Biological cost analysis (ANF)
3. Benefit-cost analysis (ANF)
4. Environmental Impact Statement (FI&DM and ANF-RO)
5. Decision for action (ANF-RO)
6. Project proposal (ANF-RO)
7. Spray operations (ANF-FI&DM)
8. Action - pre and post control surveys (ANF-FI&DM)

Chemical control of any kind requires an Environmental Impact Statement and a registered insecticide. A Final Environmental Impact Statement must be submitted to CEQ ninety days prior to action. This would require the EIS to be ready by February 15, 1976. A chemical control project may be expensive and must be justified on a benefit-cost basis relative to the value of the affected resources.

No Action. Defoliation experienced during 1976 will be at least equivalent in severity to the defoliation in 1975. If no action is decided upon, then the resultant defoliation must be within tolerable limits. If control of this insect cannot be justified on a benefit-cost basis, then no action is a viable alternative. An additional alternative associated with no action would be to prepare a leaflet explaining the problem and why action is not being taken. This information would be distributed to the Forest users.

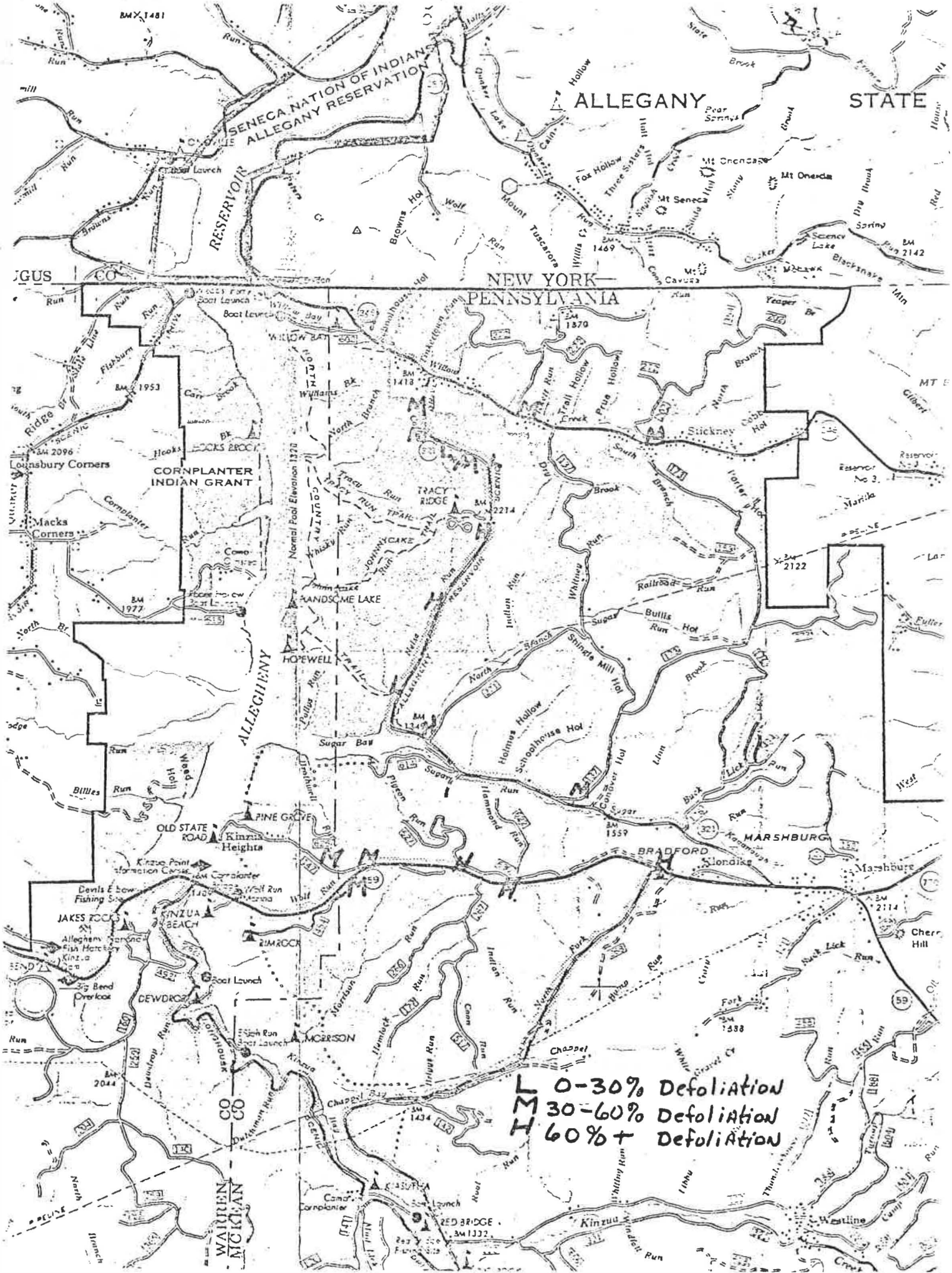
Could make spray conditional on
later prediction of mortality losses.

The information presented summarizes our analysis of the fall cankerworm problem on the Allegheny National Forest. We hope that this brief overview will aid your decision upon a plan of action.

for H. DANIEL BROWN
Field Representative
Forest Insect & Disease Management

Enclosure

cc: NA, Upper Darby
R-9 Coordinator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KINZUA BEACH
DEWDROP
McKEAN
WARREN
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M 30-60% Defoliation
H 60%+ Defoliation